

Figure 1

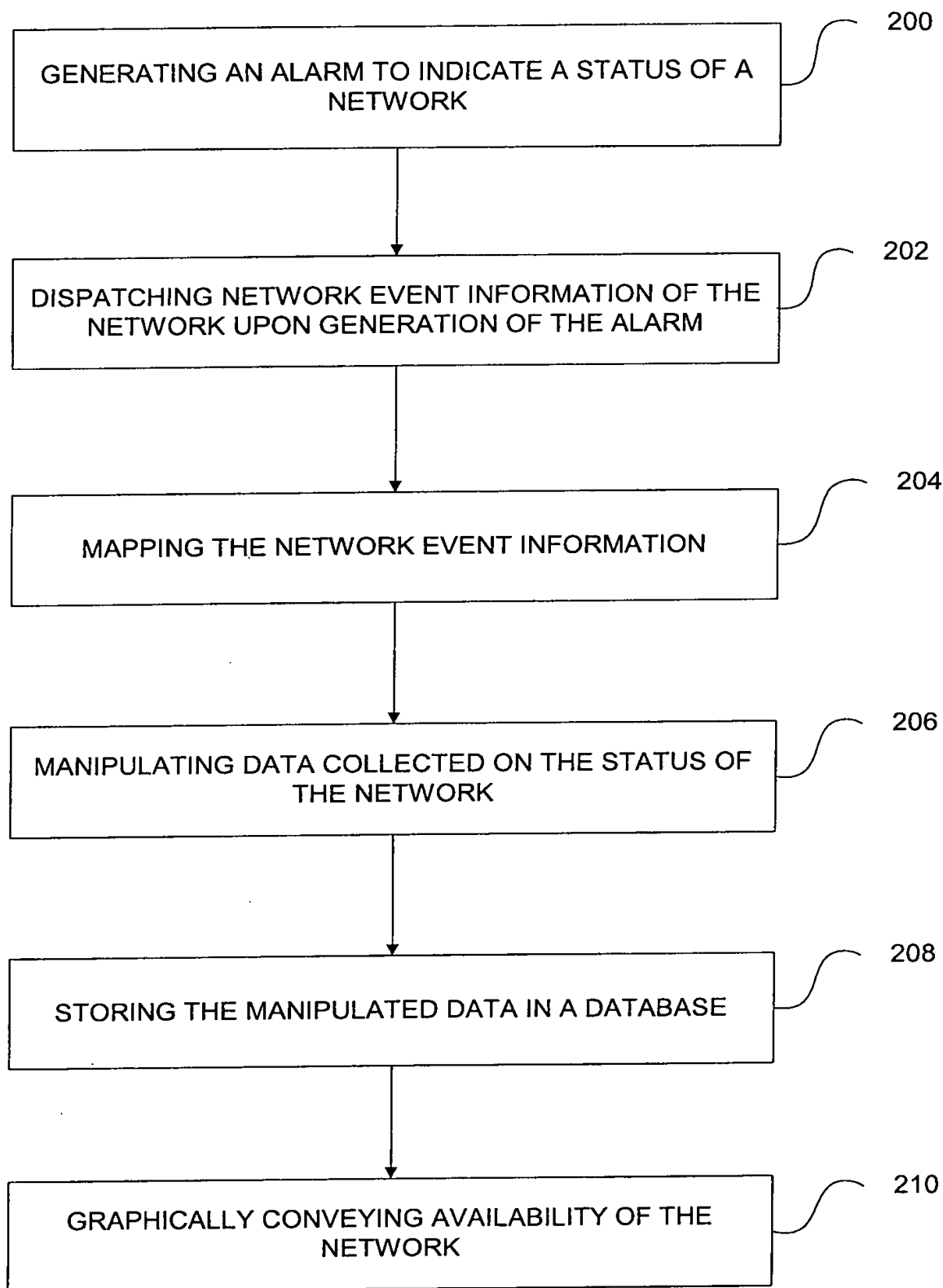


Figure 2

656227 2272450

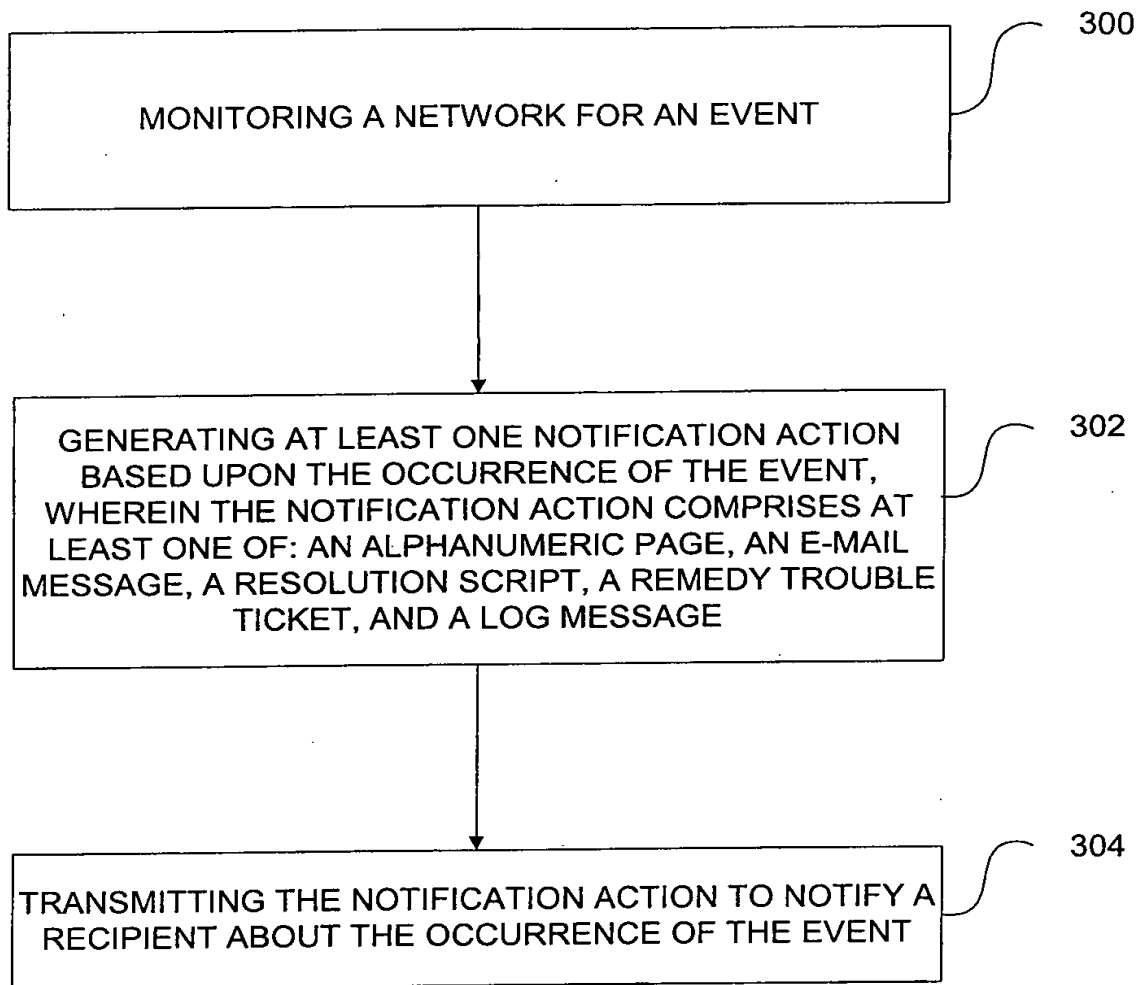


Figure 3

566227 227460

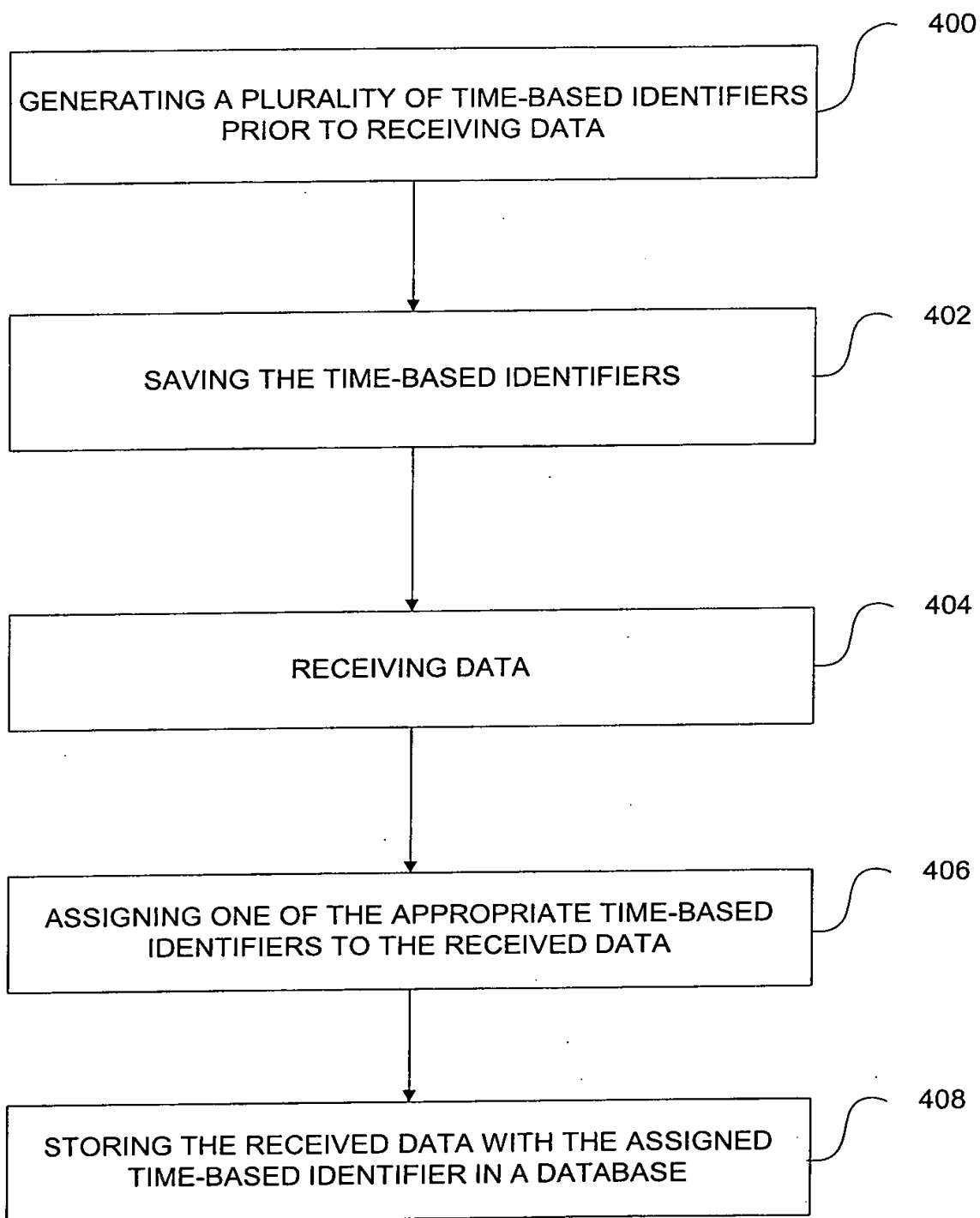


Figure 4

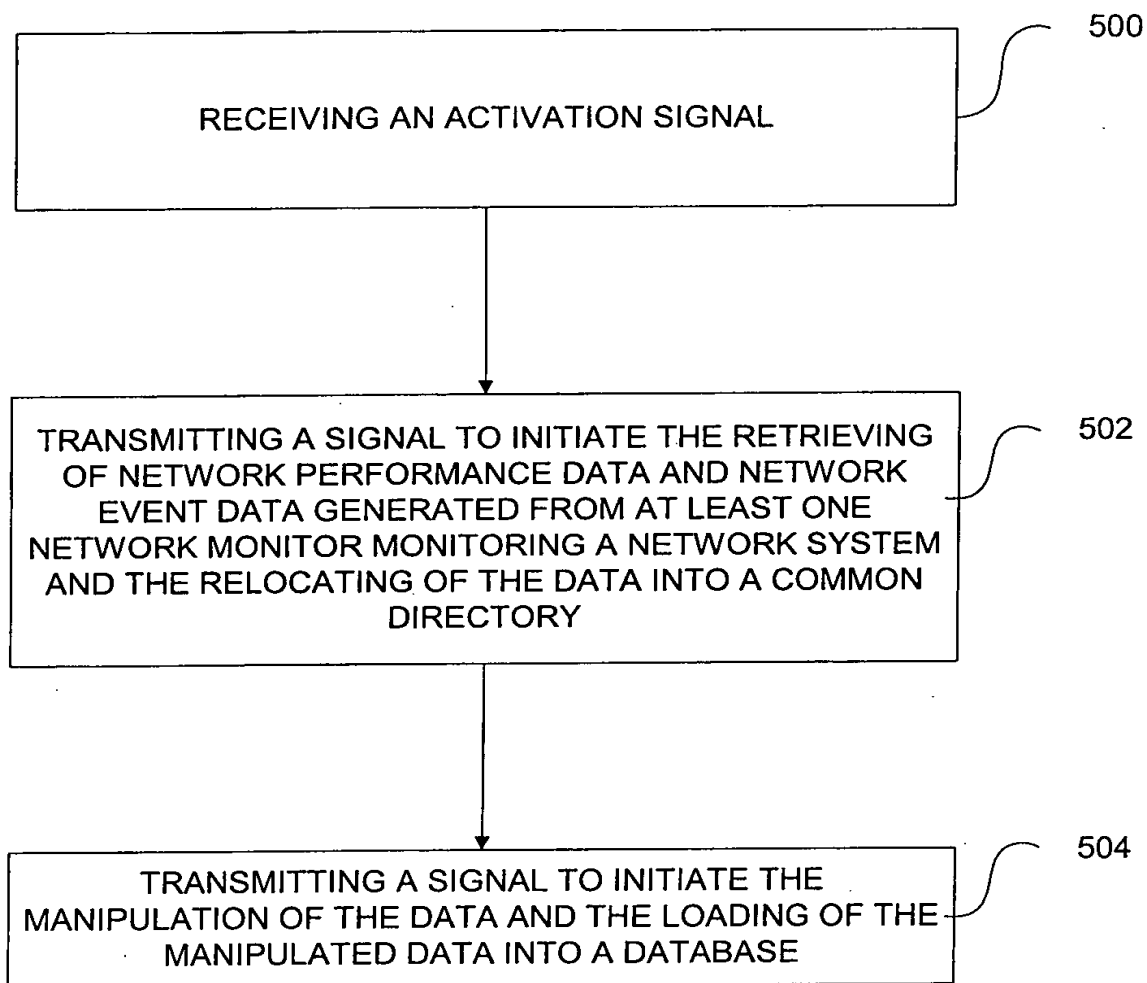


Figure 5

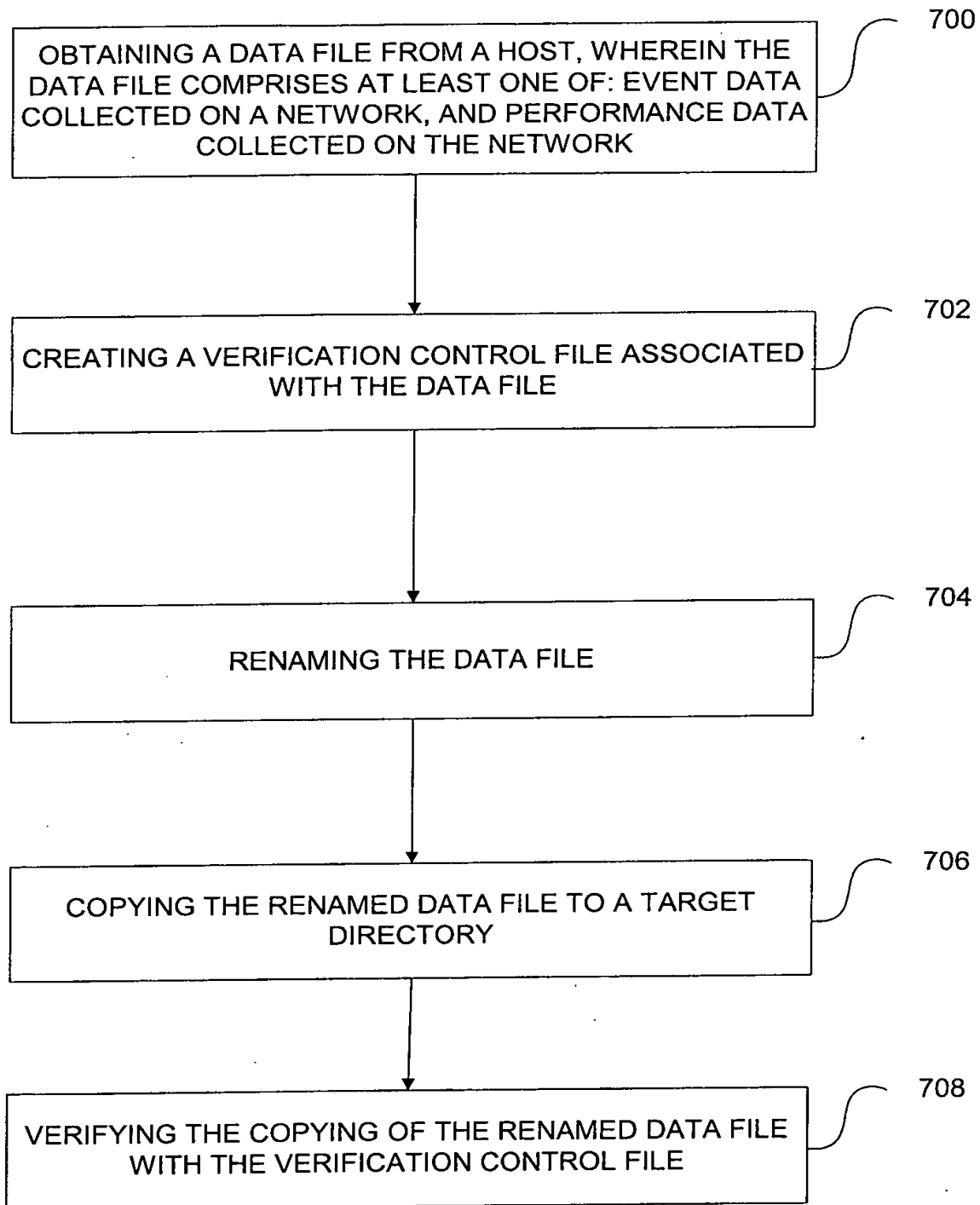


Figure 7

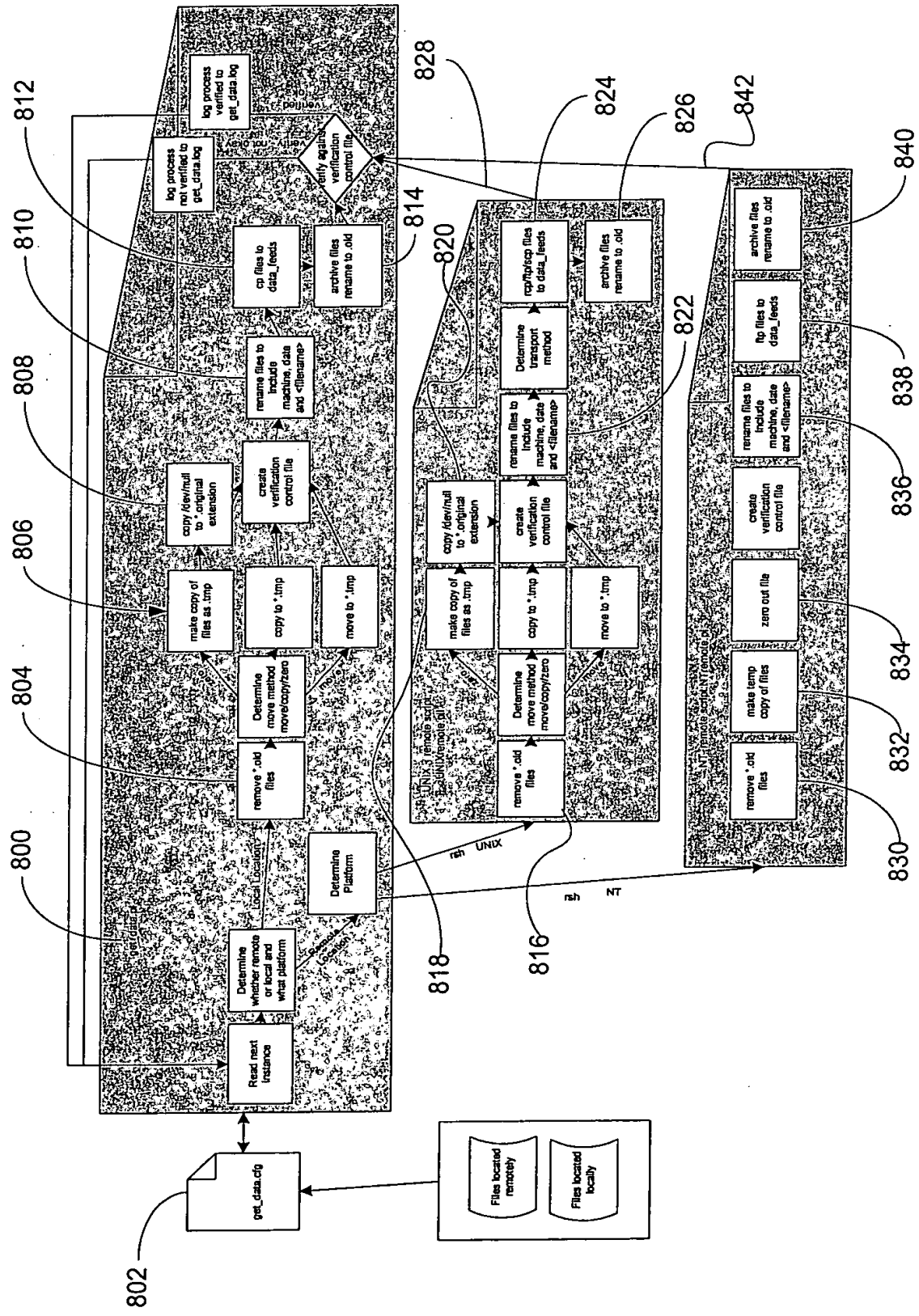


Figure 8

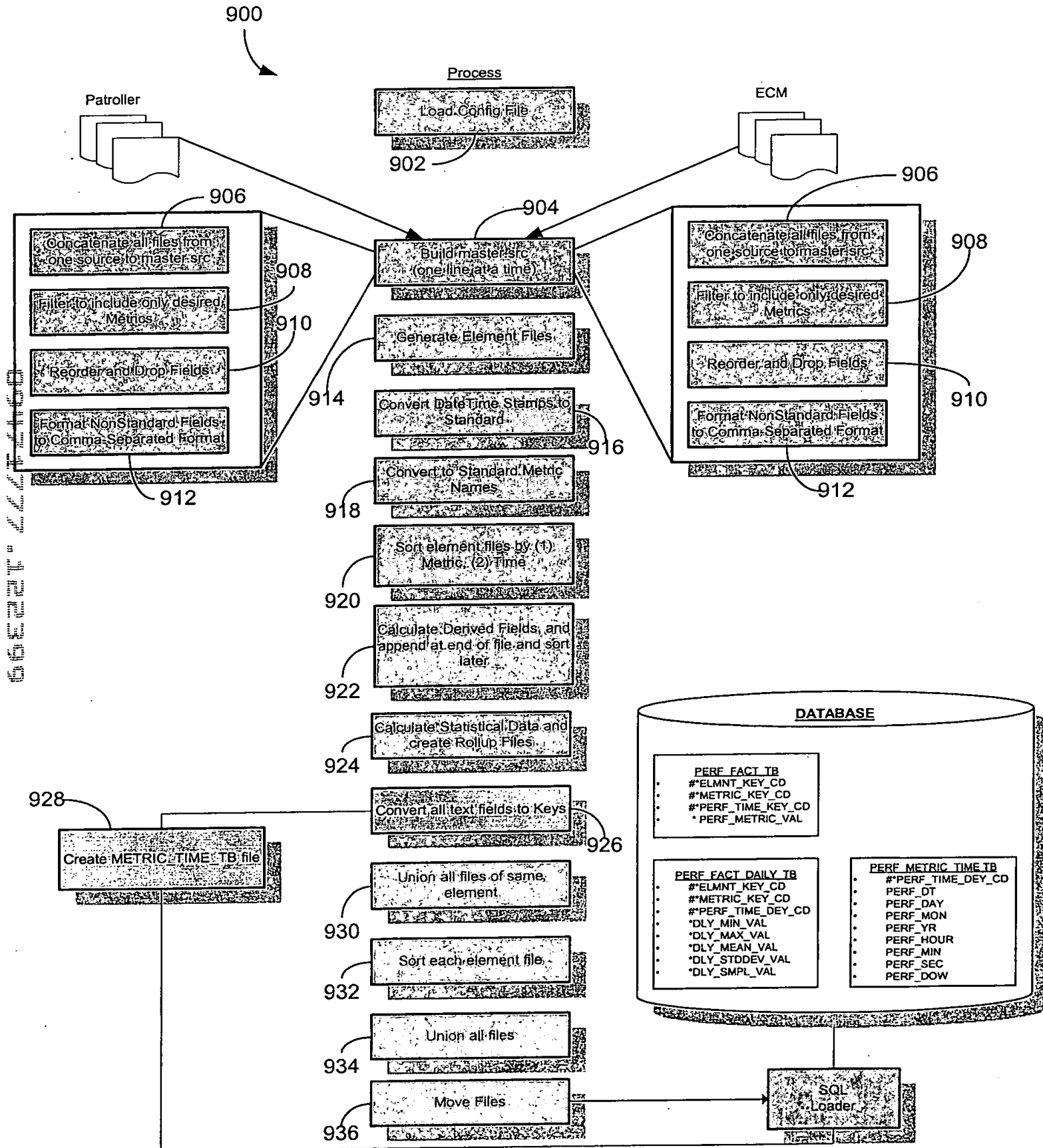


Figure 9

12/22/1999

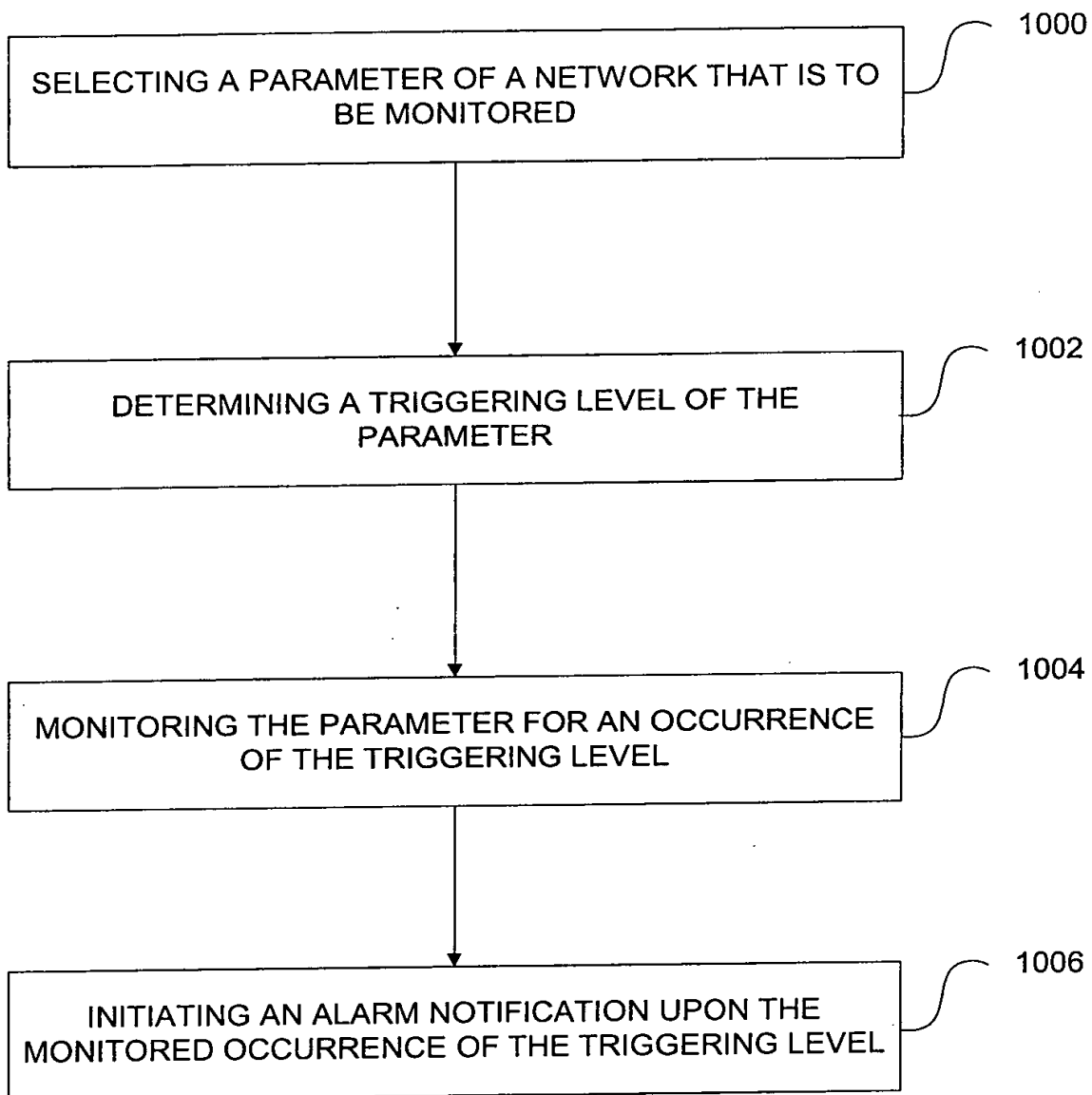


Figure 10

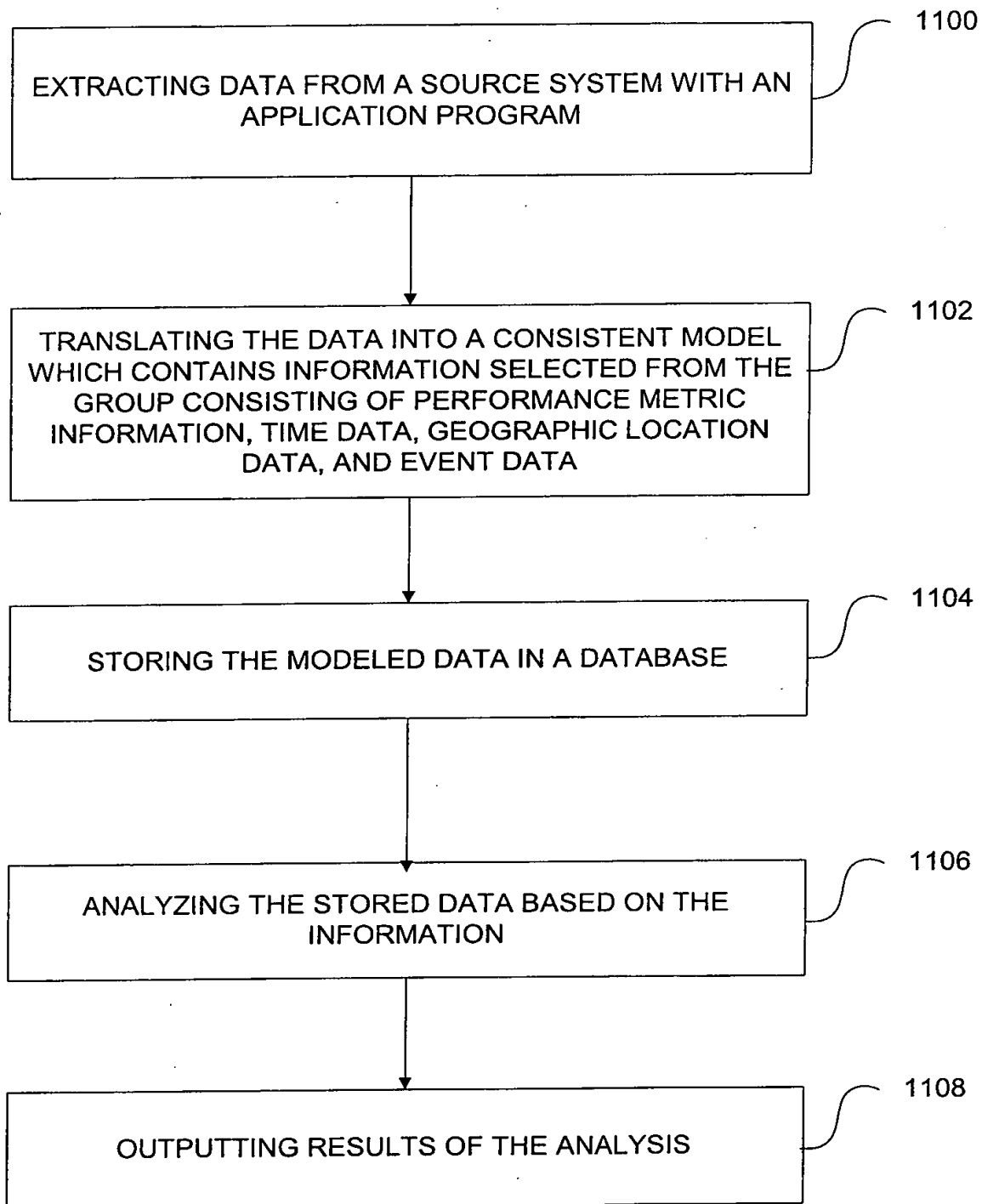


Figure 11

Tablespace	Default Status	Physical Requirements	Related Tablespace/Relationship	Datafile	Datafile Size (VIB)	Operating System	Database ID	Entity Location
IPSA DAT01	On-Line	Data only - No indexes	IPSAIDX/Index tablespace	/files5/oradata/IP SA01/IPSA01ipsa dat01.dat	100	HP-UX 10.2	IPSA01	
IPSAIDX	On-Line	Index only	IPSA DAT01/data tablespace	/files4/oradata/IP SA01/IPSA01idx 01.dbf	20	HP-UX 10.2	IPSA01	
SYSTEM	On-Line		ALL	/files1/oradata/IP SA01/IPSA01syst em01.dbf	60	HP-UX 10.2	IPSA01	
TEMP01	On-Line		ALL	/files3/oradata/IP SA01/IPSA01tmp 01.dbf	20	HP-UX 10.2	IPSA01	
RBS01	On-Line	Contains the 4 rollback segments for the database	ALL	/files2/oradata/IP SA01/IPSA01rbs 01.dbf	30	HP-UX 10.2	IPSA01	

Figure 12

Elements	2,000	2,500	5,000	10,000	20,000	50,000
Average Metrics/Element	10	10	10	10	10	10
Poll Frequency	100	100	100	100	100	100
Detail Data Retention	40	40	40	40	40	40
Daily Rollup Data Retention	400	400	400	400	400	400
Detail Records/Day	2,000,000	2,500,000	5,000,000	10,000,000	20,000,000	50,000,000
Total Detail Records	80,000,000	100,000,000	200,000,000	400,000,000	800,000,000	2,000,000,000
Daily Rollup Records/Day	20,000	25,000	50,000	100,000	200,000	500,000
Total Daily Rollup Retained	8,000,000	10,000,000	20,000,000	40,000,000	80,000,000	200,000,000
Total Records	88,000,000	110,000,000	220,000,000	440,000,000	880,000,000	2,200,000,000
Total Space/Table (bytes)						
ELMNT_LOC_TB	90,000	112,500	225,000	450,000	900,000	2,250,000
NETWORK_ELMNT_TB	204,000	255,000	510,000	1,020,000	2,040,000	5,100,000
PERF_FACT_DAILY_TB	208,000,000	260,000,000	520,000,000	1,040,000,000	2,080,000,000	5,200,000,000
PERF_FACT_TB	3,280,000,000	4,100,000,000	8,200,000,000	16,400,000,000	32,800,000,000	82,000,000,000
PERF_METRIC_TIME_TB	1,285,632,000	1,285,632,000	1,285,632,000	1,285,632,000	1,285,632,000	1,285,632,000
PERF_METRIC_TB	1,638	1,638	1,638	1,638	1,638	1,638
Total Space Needed (bytes)	4,773,927,638	5,646,001,138	10,006,368,638	18,727,103,638	36,168,573,638	88,492,983,638
Total Space Needed (MB)	4,662.04	5,513.67	9,771.84	18,288.19	35,320.87	86,418.93

Figure 13

Table	Column	Data Type	Column Size (bytes)	Row Size (bytes)	Space Used/Row (bytes)
ELMNT_LOC_TB	ELMNT_LOC_CD	Varchar2(5)	6	43	45
	ELMNT_CITY_NM	Varchar2(30)	31		
	ELMNT_STATE_DBRV	Varchar2(2)	3		
EVENT_CD_TB	EVENT_CD			3	11
	EVENT_STRING				
	EVENT_AVAIL_TYPE				
	EVENT_PAIR				
EVENTS_FACT_TB	ELMNT_KEY_CD	Number(10)	7	17	19
	PERF_TIME_KEY_CD	Number(10)	7		
	EVENT_CD				
	EVENT_DURATION				
	EVENT_SEVERITY				
	EVENT_CLASS				
NETWORK_ELMNT_TB	ELMNT_KEY_CD	Number(10)	7	100	102
	ELMNT_NM	Varchar2(20)	21		
	ELMNT_TYPE_CD	Varchar2(2)	3		
	ELMNT_VNDR_NM	Varchar2(30)	31		
	ELMNT_VNDR_MDL	Varchar2(20)	21		
	ELMNT_VAL_DT	Date	8		
	ELMNT_LOC_CD	Varchar2(5)	6		
PERF_FACT_DAILY_TB	ELMNT_KEY_CD	Number(10)	7	24	26
	METRIC_KEY_CD	Number(10)	7		
	PERF_TIME_KEY_CD	Number(10)	7		
	DLY_MIN_AMT				
	DLY_MAX_AMT				
	DLY_MEAN_AMT				
	DLY_MEDIAN_AMT				
	DLY_STDDEV_AMT				
PERF_FACT_TB	ELMNT_KEY_CD	Number(10)	7	39	41
	PERF_TIME_KEY_CD	Number(10)	7		
	METRIC_KEY_CD	Number(10)	7		
	PERF_METRIC_VAL	Number(25,5)	15		
PERF_METRIC_TB	METRIC_KEY_CD	Number(10)	7	124	126
	METRIC_NM	Varchar2(30)	31		
	METRIC_SRC	Varchar2(20)	21		
	METRIC_INS	Varchar2(30)	31		
	METRIC_SUB_INS	Varchar2(30)	31		
PERF_METRIC_TIME_TB	PERF_TIME_KEY_CD	Number(10)	7	370	372
	PERF_DT	Date	8		
	PERF_DAY	Number(2)	2		
	PERF_MON	Number(2)	2		
	PERF_YR	Number(4)	3		
	PERF_HOUR	Number(2)	2		
	PERF_MIN	Number(2)	2		
	PERF_SEC	Number(2)	2		
	PERF_DOW	Varchar2(9)	10		

Figure 14

	Time to Load (Direct)	Time to Load (Conventional)	Number of Rows Loaded	Amount of data (MB)	Comments
Empty Table	00:04:32	00:30:12	1,048,576	35	
1 mil rows in table	00:06:29	00:32:57	1,048,576	35	Index was 10 MB larger for conventional load. This suggest some degree of fragmentation occurred during load which would require weekly index maintenance
Empty Table	00:14:49	01:31:47	3,145,728	106	
2 mil rows in table	00:08:49	00:35:49	1,048,576	35	Index was 30 MB larger for conventional load. This suggest some degree of fragmentation occurred during load which would require weekly index maintenance
Empty Table	00:30:10	03:05:24	6,291,456	212	
3 mil rows in table	00:22:52	01:33:15	3,145,728	106	Had to increase the size of the index tablespace in order for the new index and the old index to merge at the end of direct load.

Figure 15

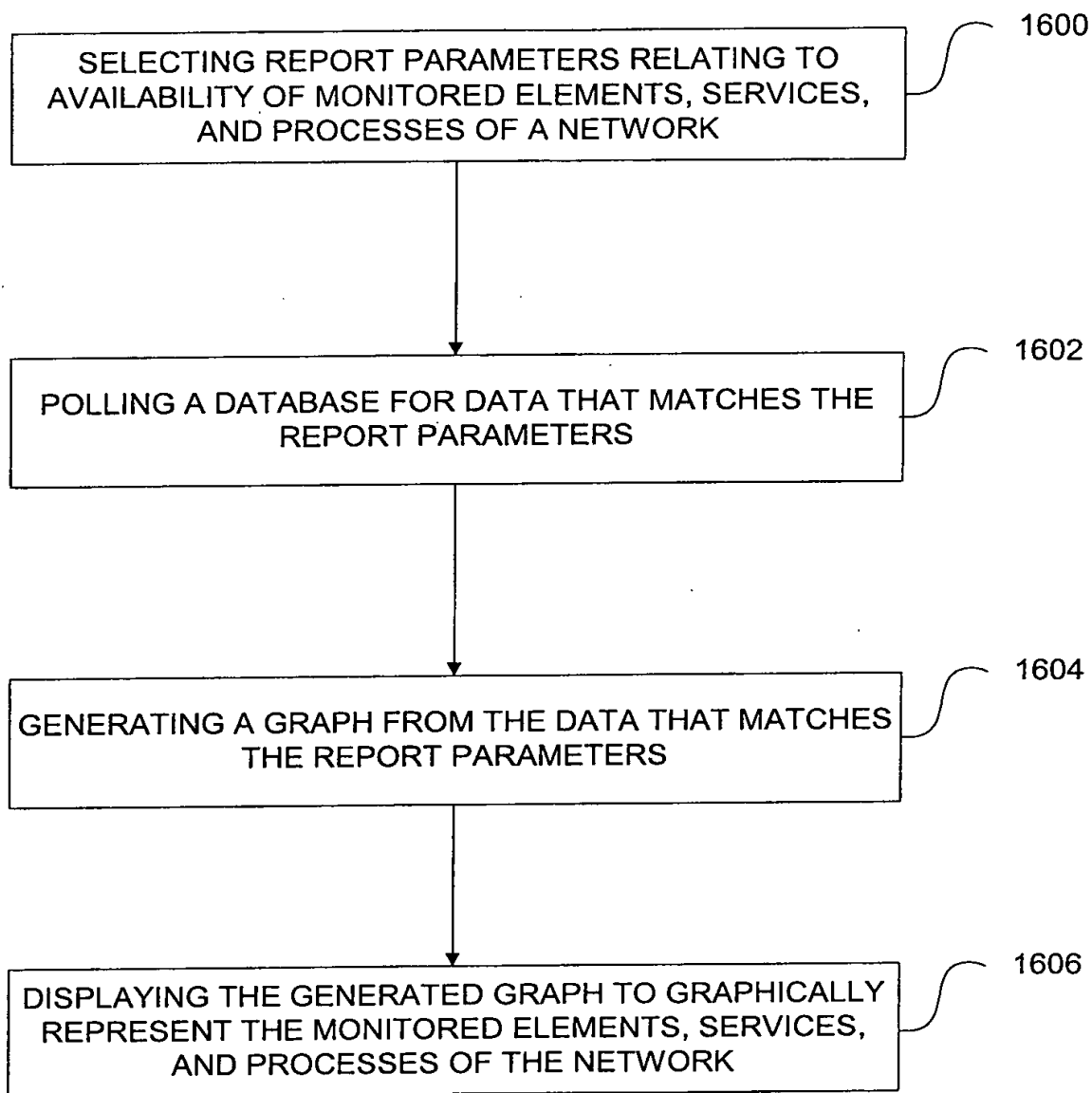


Figure 16

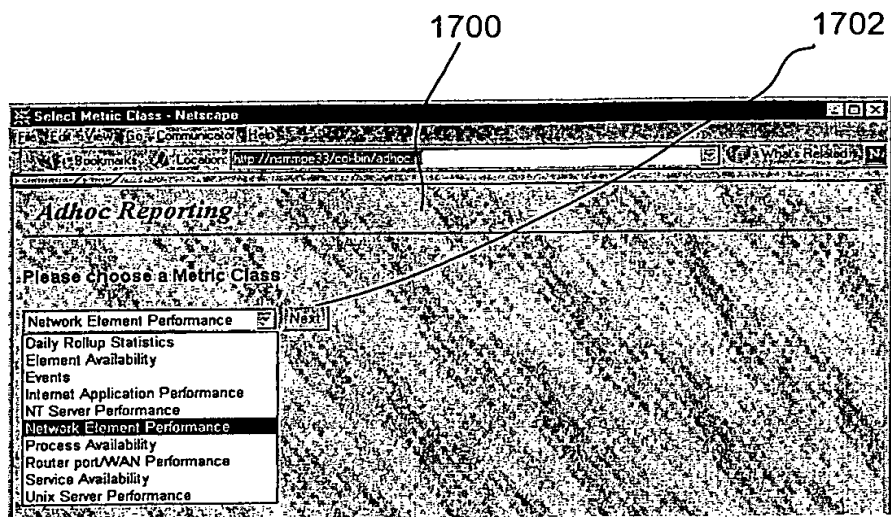


Figure 17A



Figure 17B

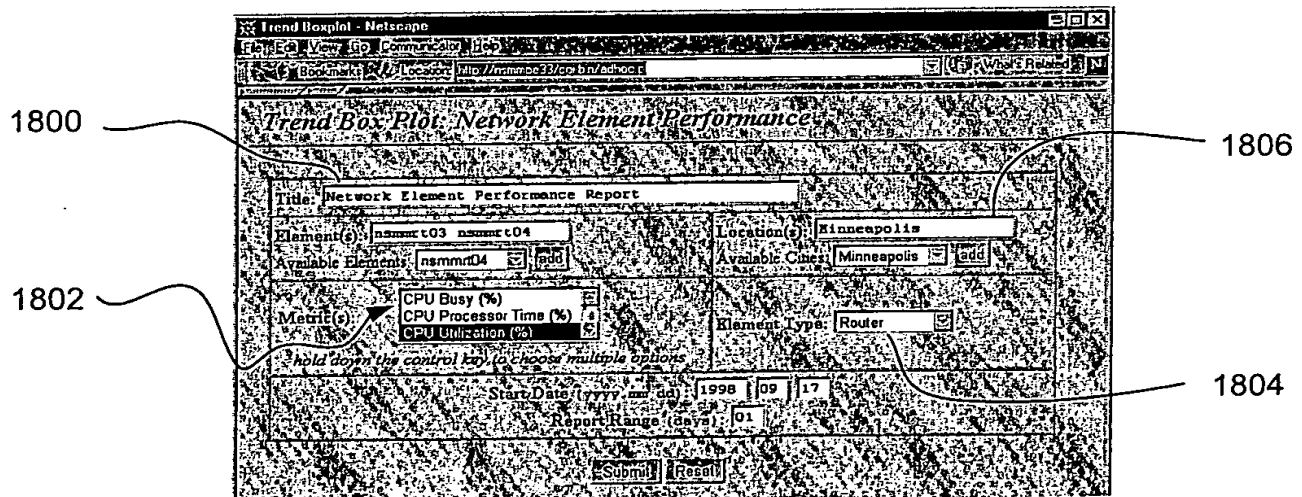


Figure 18

66E22T 2227460

[illegible]

Figure 21

1st Menu choice	2nd menu choice	3rd menu choice	4th menu choice	5th menu choice	6th menu choice	7th menu choice	Metrics(s)
Select Metric Class	Select Report Type	Select Element(s)	Select Location(s)	Select start date	# of days		
default	N/A	all	all	yesterday	1		
Element Availability	Percent Availability Bar Graph	<element name>	<element location>	<start date>	<days>		N/A
Service Availability	Percent Availability Bar Graph	<element name>	<element location>	<start date>	<days>	<service>	N/A
Process Availability	Percent Availability Bar Graph	<element name>	<element location>	<start date>	<days>	<process>	N/A
Events	Exception Spectrum	<element name>	<element location>	<start date>	<days>		N/A
Network Element Performance	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>		Cpu Utilization (busyper)
	Trend Boxplot	<element name>	<element location>	<start date>	<days>		Cpu Utilization (busyper)
	Comparison Boxplot	<element name>	<element location>	<start date>	<days>		Cpu Utilization (busyper)
Router port / WAN Performance	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>	<instance>	Interface Utilization (linOutOctets)
	Trend Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Interface Utilization (linOutOctets)
	Comparison Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Interface Utilization (linOutOctets)
Unix Server Performance	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
	Trend Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
	Comparison Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
NT Server Performance	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
	Trend Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
	Comparison Boxplot	<element name>	<element location>	<start date>	<days>	<instance>	Cpu Utilization, Memory Utilization, Network Utilization, Disk Percent Busy
Internet Application Performance*	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>		Response Time
	Trend Boxplot	<element name>	<element location>	<start date>	<days>		Response Time
	Comparison Boxplot	<element name>	<element location>	<start date>	<days>		Response Time
Daily Rollup Statistics	Detail XY Line Graph	<element name>	<element location>	<start date>	<days>	<metric name>	<rollup statistic> (min, max, mean, std dev, sample size)

SNMP/PATROL METRICS	DESCRIPTION	PLATFORM	UNITS
busyPer	Provides the percent of CPU usage over the first 5 second period in the scheduler.	Router	percentage
ifInOctets	The total number of octets received on the interface, including framing characters.	Router Interface	octets
ifOutOctets	The total number of octets transmitted out of the interface, including framing characters.	Router Interface	octets
ifSpeed	An estimate of the interface's current bandwidth in bits per second. For interfaces which do not vary in bandwidth or for those where no accurate estimation can be made, this object should contain the nominal bandwidth.	Router Interface	bits per second
CPUcpuUtil	Displays the percentage of CPU utilization.	UNIX	percentage
MEMFreeMem	Displays the number of pages of memory available.	UNIX	pages
NETPacketsIn	Displays the total number of incoming packets within a sample interval.	UNIX	packets
NETPacketsOut	Displays the total number of outgoing packets within a sample interval.	UNIX	packets
DSKPercentBusy	Displays the percentage of time that the device is busy servicing a transfer request.	UNIX	percentage
CPUprocProcessorTimePercent	Displays a percentage of the elapsed time that a processor is busy executing a non-idle thread.	NT	percentage
MEMMemAvailableBytes	Displays the size of the virtual memory currently on the zeroed, free, and standby memory lists.	NT	megabytes
NETInPktsPerSec	Displays the rate that the packets are sent and received on the network.	NT	packets per second
PDpdDiskTimePercent	Displays the percentage of elapsed time that the disk spends servicing read or write requests.	NT	percentage

Figure 22

0947177-12299
666227-122460

Detail XY Line Graph

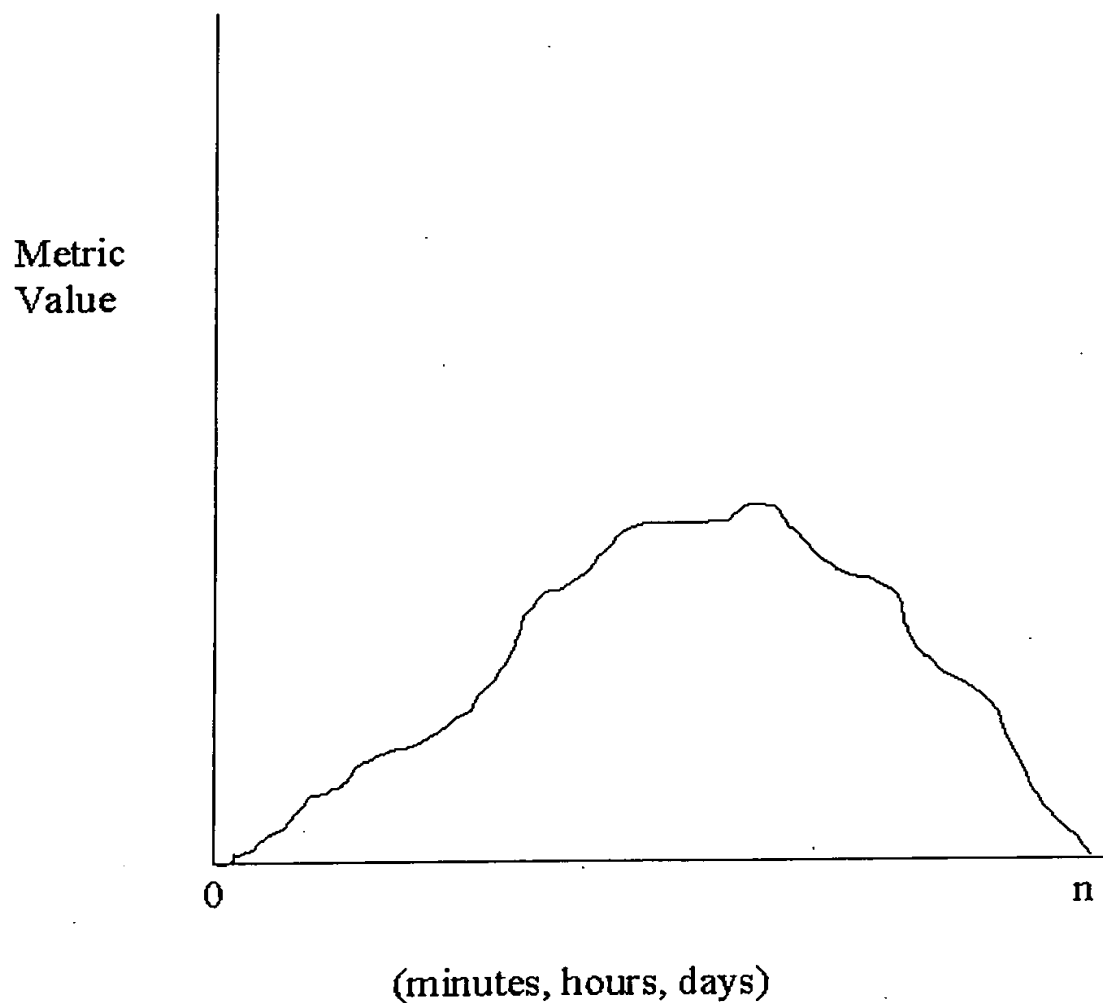


Figure 23

Detail XY Line Graph, n objects

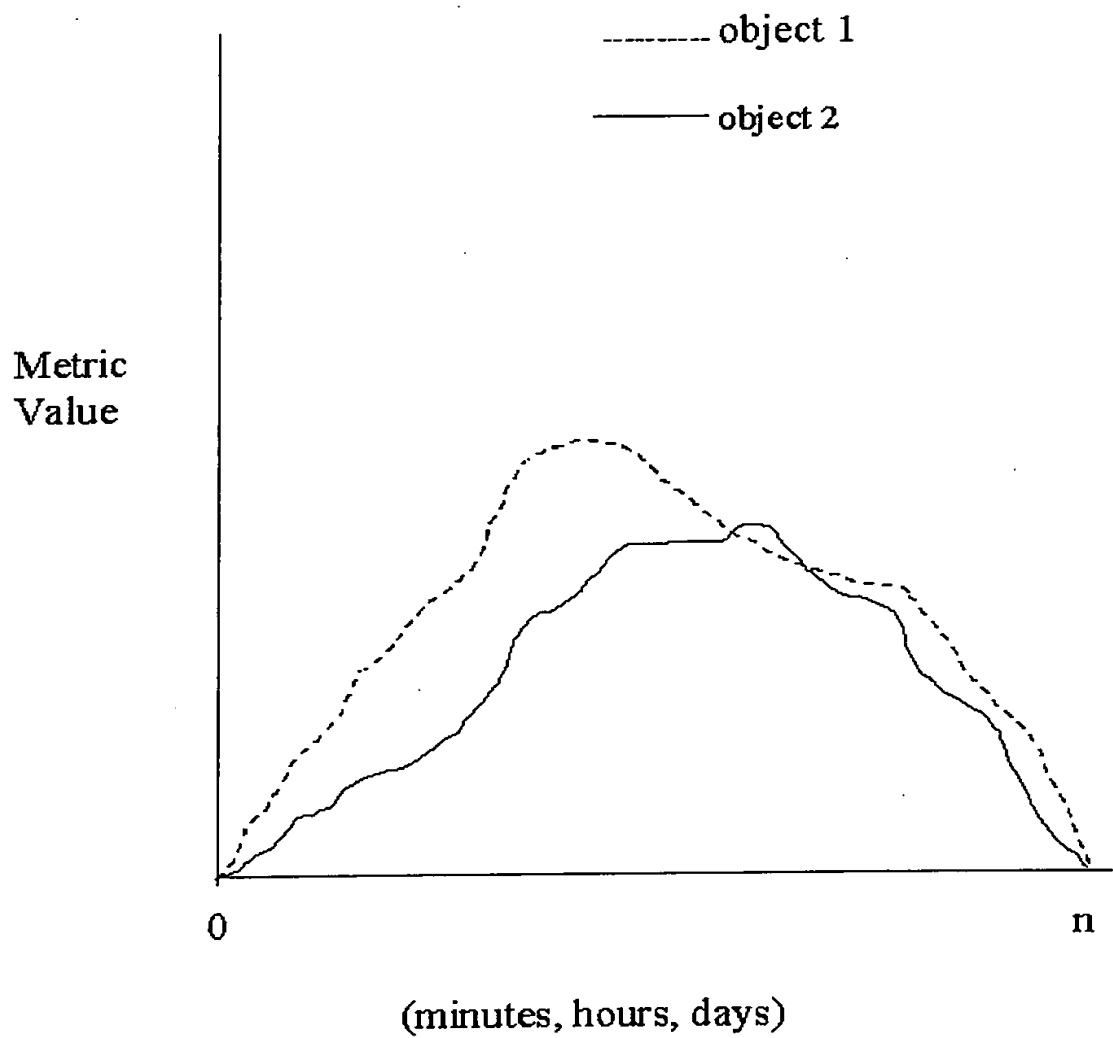


Figure 24

Comparison Boxplot

Representing samples taken from:
mm/dd/yyyy to mm/dd/yyyy

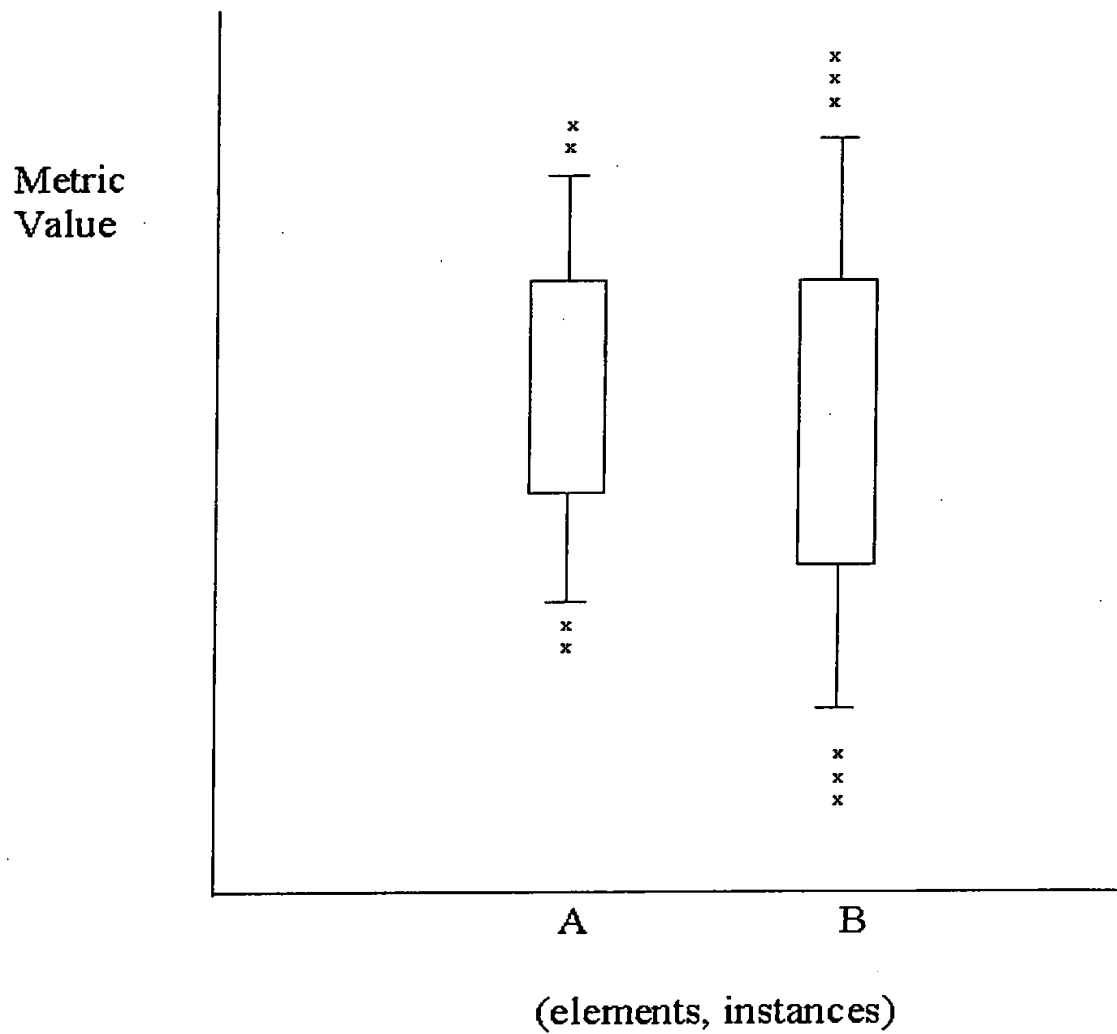


Figure 25

Trend Boxplot

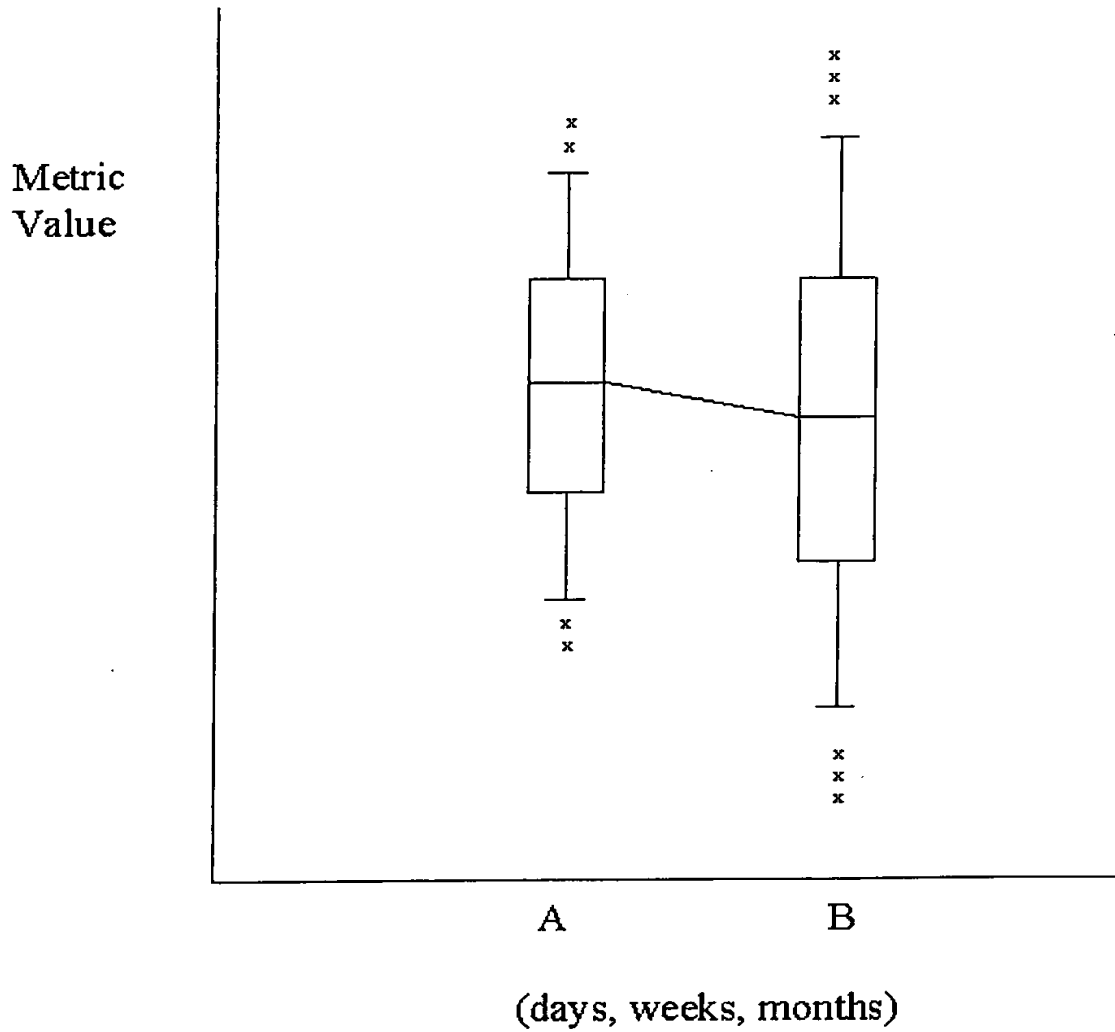


Figure 26

004477-12339
66E22T 14T460

Percent Availability Bar Graph

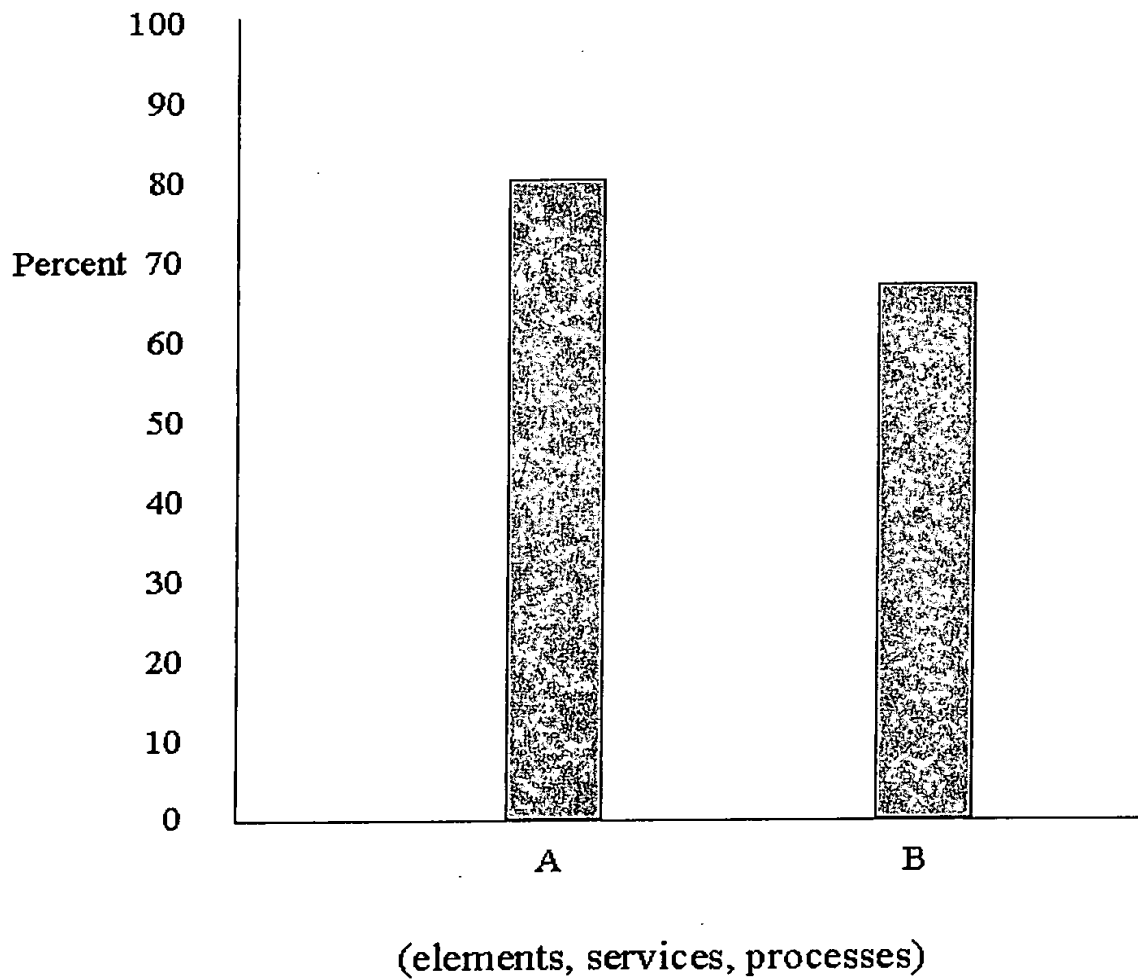


Figure 27

Availability Spectrum

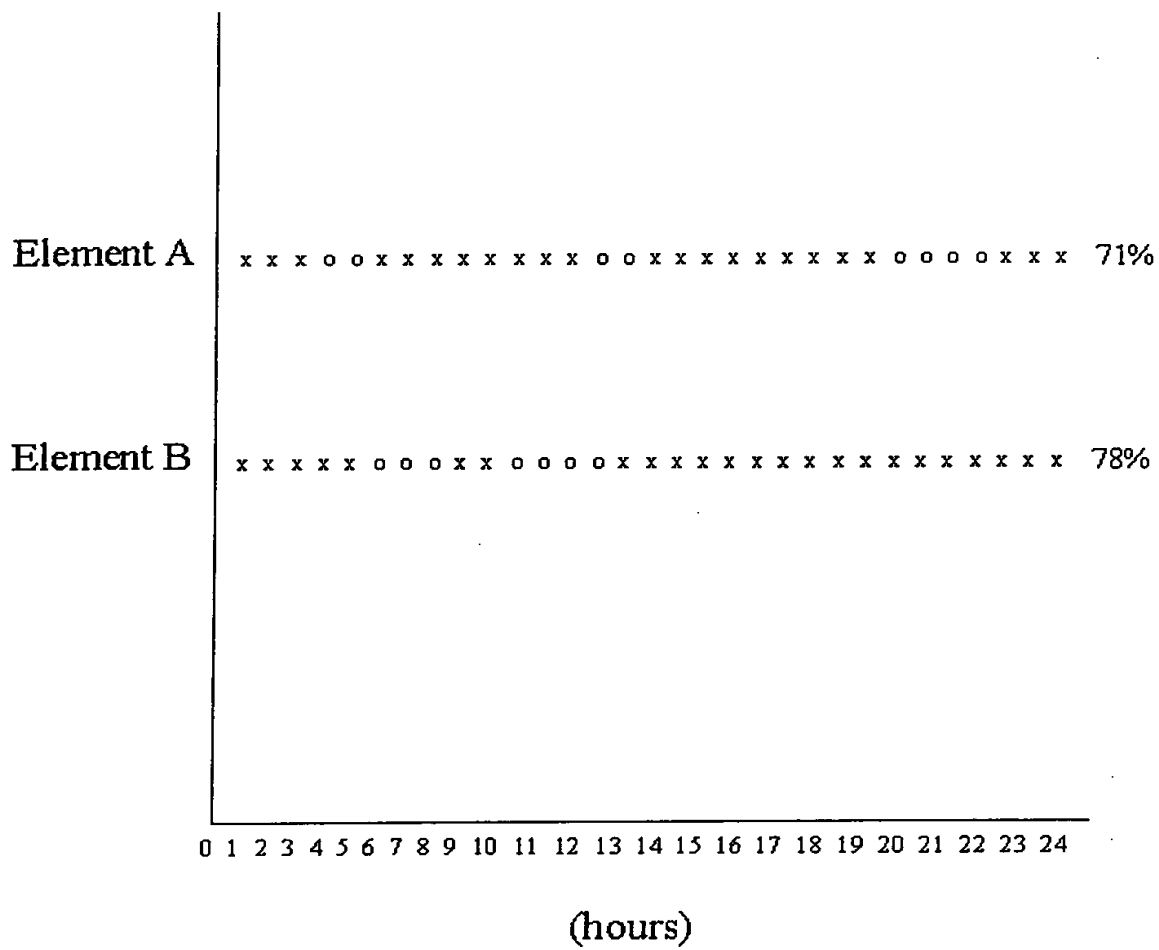


Figure 28

Exception Spectrum

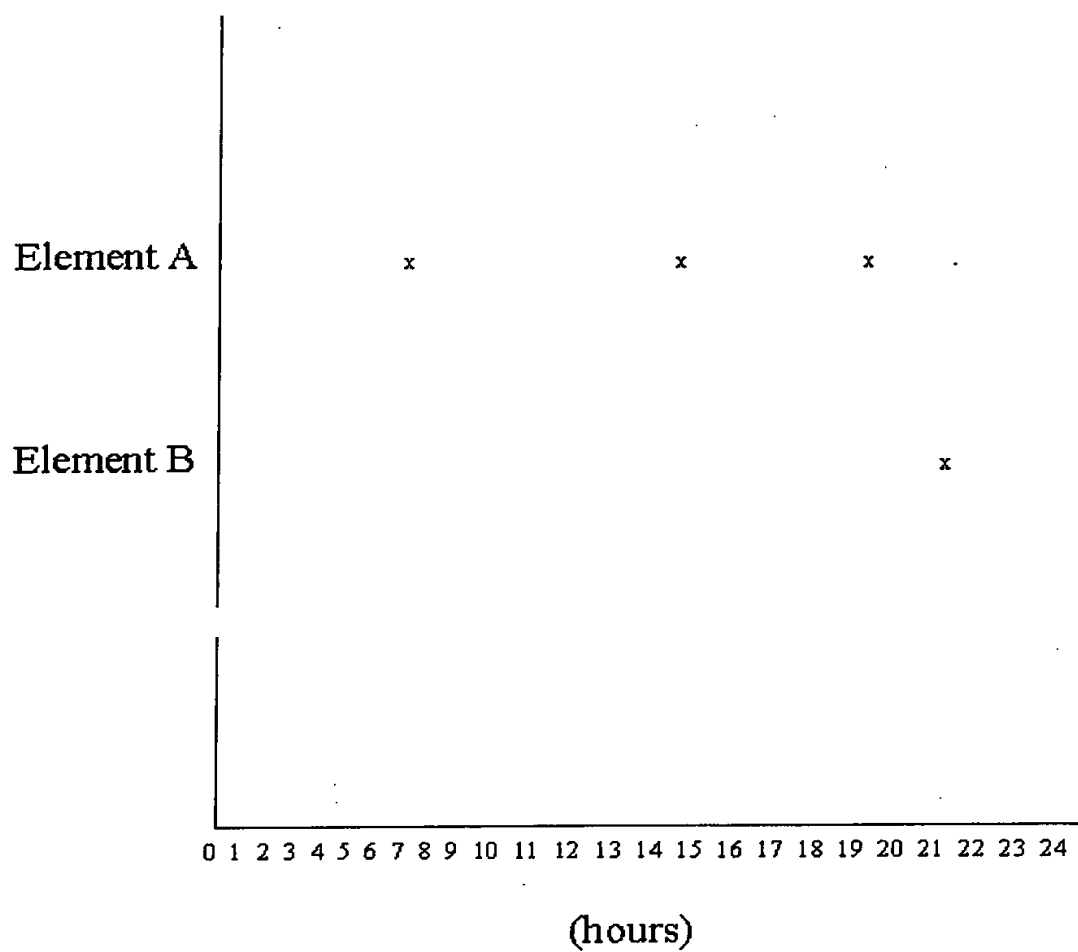


Figure 29

Exception Text Report

<u>Date - Time</u>	<u>Element</u>	<u>Event string</u>	<u>Duration</u>	<u>Severity</u>
01/12/1998 06:34:12	nsmmws16	CPU Utilization over 80%		
		Critical		
01/12/1998 08:01:23	nsmmws09	Host down	3:24:43	Critical
01/12/1998 16:54:52	twmmnt02	FTP service down	0:19:42	Critical

Figure 30

0947177-122399
668227-122460

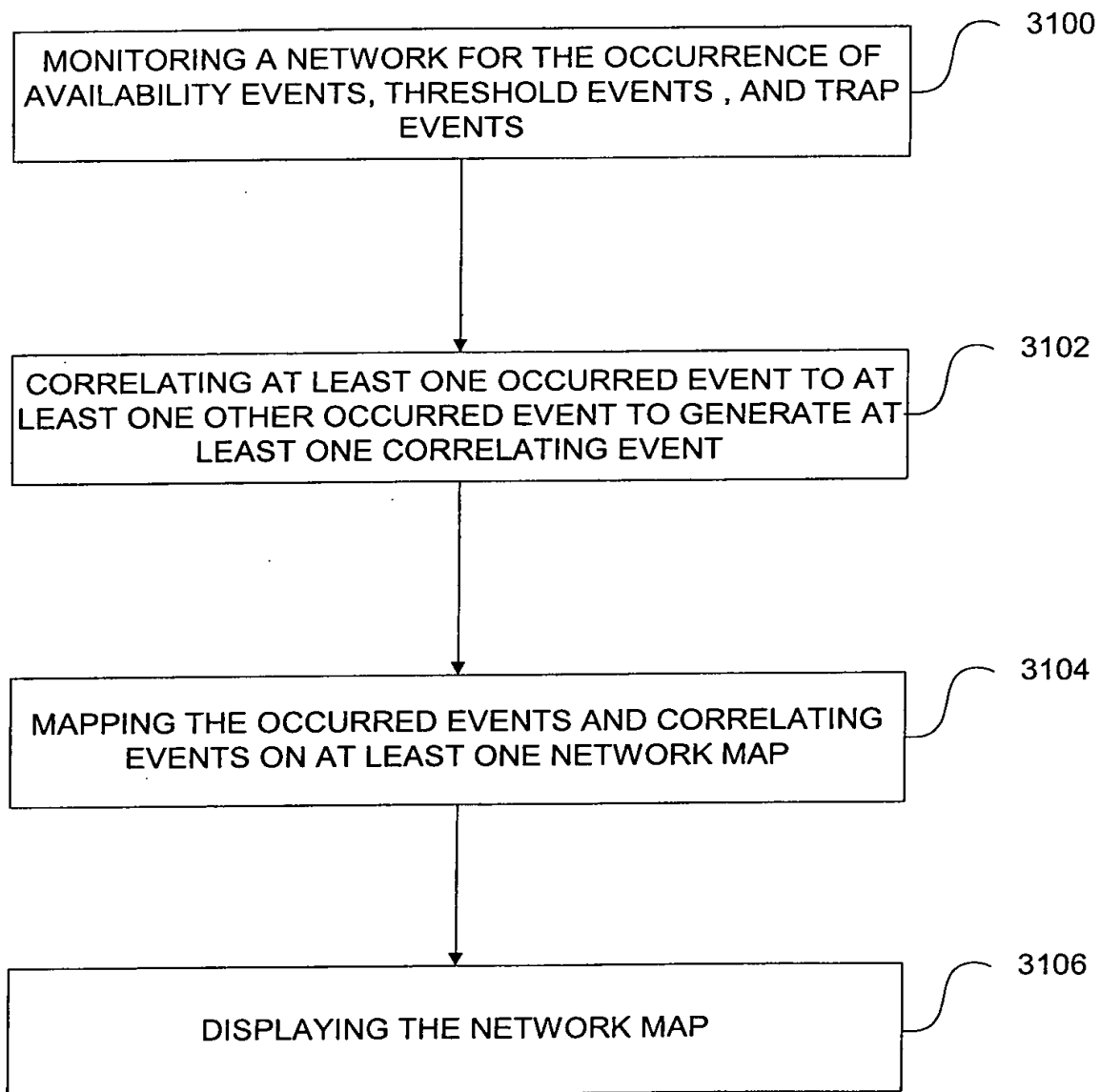
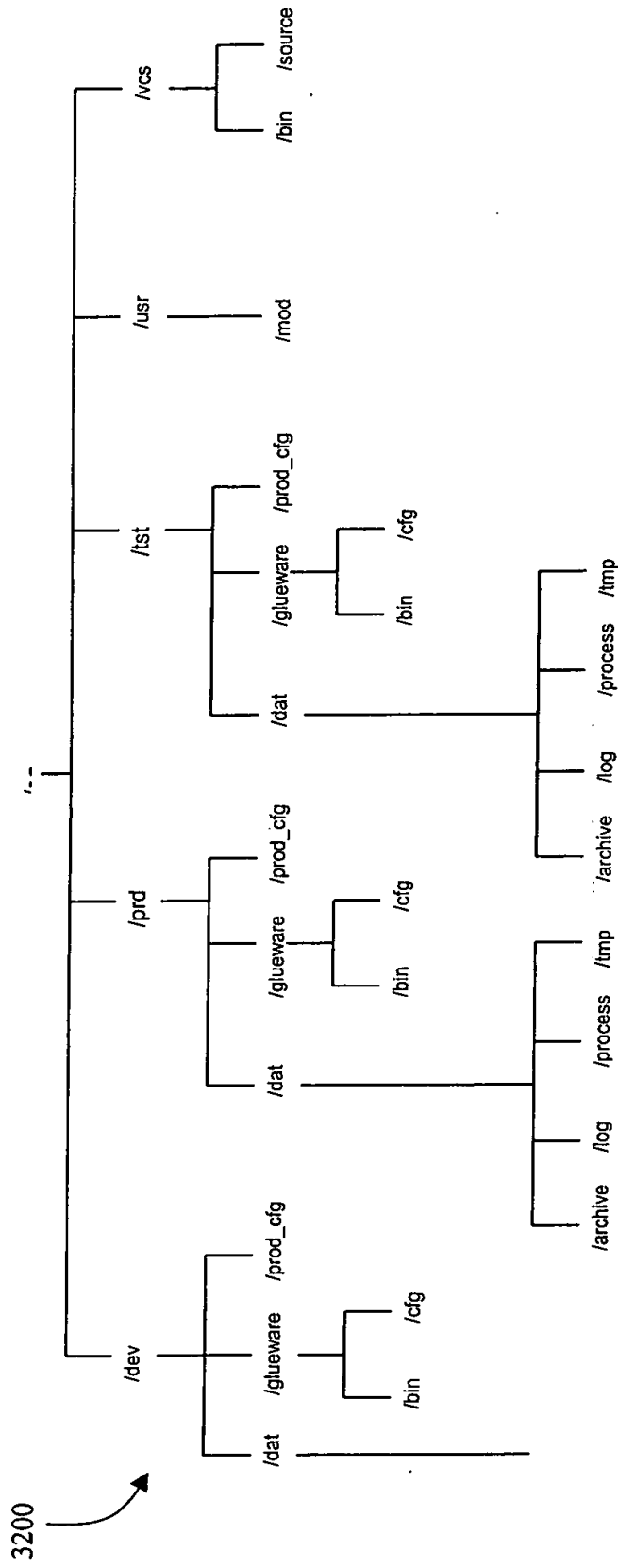


Figure 31



Current Settings/Valid Values

Directory structure will be stored on ucmmfs02

The directory /sa will be the mount point to
nsmmws09, nsmmws16, and twmmb02
Files owned by with group of twsa

Figure 32